

1 ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

2 Department For Environmental Protection

3 Division for Air Quality

4 (New Administrative Regulation)

5 401 KAR 51:210. CAIR Nox annual trading program.

6 RELATES TO: KRS 224.10-100, 224.20-100, 224.20-110, 224.20-120, 40 C.F.R.
7 51.121, 51.122, 72.2, 75.1, 75.2, 75.4, 75.11 to 75.13, 75.17, 75.19, 75.20, 75.24,
8 75.70, 75.72, 75.74, 75.75, Part 96, 42 U.S.C. 7410

9 STATUTORY AUTHORITY: KRS 224.10-100(5), 42 U.S.C. 7410

10 NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(5) requires the
11 Environmental and Public Protection Cabinet to promulgate administrative regulations
12 for the prevention, abatement, and control of air pollution. This administrative regulation
13 establishes requirements for the control of nitrogen oxides (NOx) emissions from large
14 boilers and turbines used in power plants, pursuant to the federal mandate published
15 under the Clean Air Interstate Rule (CAIR), 40 C.F.R. 96.101 to 96.176. This
16 administrative regulation is not more stringent than the provisions allowed under the
17 federal mandate.

18 Section 1. Applicability. This administrative regulation shall apply to CAIR NOx
19 units in Kentucky that are subject to 40 C.F.R. 96.104.

20 Section 2. Compliance requirements. CAIR NOx units shall comply with the
21 following requirements:

1 (1) 40 C.F.R. 96.101 to 96.108 (Subpart AA), "CAIR NOx Annual Trading
2 Program General Provisions";

3 (2) 40 C.F.R. 96.110 to 96.114 (Subpart BB), "CAIR Designated Representative
4 for CAIR NOx Sources";

5 (3) 40 C.F.R. 96.120 to 96.124 (Subpart CC), "Permits";

6 (4) 40 C.F.R. 96.150 to 96.157 (Subpart FF), "CAIR NOx Allowance Tracking
7 System";

8 (5) 40 C.F.R. 96.160 to 96.162 (Subpart GG), "CAIR NOx Allowance Transfers";
9 and

10 (6) 40 C.F.R. 96.170 to 96.176 (Subpart HH), "Monitoring and Reporting".

11 Section 3. Methodology for the Allocation and Sale of CAIR NOx Annual
12 Allowances. The number of CAIR NOx allowances to be allocated to each CAIR NOx
13 unit by the cabinet and to be sold by the Commonwealth of Kentucky shall be
14 determined pursuant to this section.

15 (1) The total number of CAIR NOx allowances shall be the number of CAIR NOx
16 allowances assigned to Kentucky by the U.S. EPA and approved in Kentucky's State
17 Implementation Plan (SIP).

18 (2) The total number of CAIR NOx allowances assigned to Kentucky shall be
19 divided into separate pools as follows:

20 (a) Ninety-eight (98) percent of this amount allocated for each control period to
21 units that commence commercial operation before:

22 1. January 1, 2006, for the control periods 2009, 2010, 2011, 2012, 2013, and
23 2014;

1 2. January 1, 2009, for the control period 2015; and

2 3. Thereafter, January 1 of the year that is six (6) years before the first year of
3 the next control period; and

4 (b) Two (2) percent of this amount for each control period sold by the
5 Commonwealth of Kentucky with the proceeds deposited into Kentucky's general fund.

6 (3) For each CAIR NOx unit, the baseline heat input in mmBtu shall be
7 determined and shall be used to determine CAIR NOx allowances for the pool specified
8 in subsection (2)(a) of this section as follows:

9 (a) For CAIR NOx units commencing operation before January 1, 2001, and

10 1. Operating each calendar year during a period of five (5) or more consecutive
11 years, the baseline heat input shall be the average of the three (3) highest amounts of
12 the unit's adjusted control period heat input for 2001 through 2005;

13 2. Not previously operating each calendar year during a period of five (5) or more
14 consecutive years, the baseline heat input shall be the average of the three (3) highest
15 amounts of the unit's adjusted control period heat input for five (5) consecutive years of
16 operation;

17 (b) For units commencing operation on or after January 1, 2001, and operating
18 each calendar year during a period of five (5) or more consecutive years, the baseline
19 heat input shall be the average of the three highest amounts of the unit's adjusted
20 control period heat input for five (5) consecutive years of operation;

21 (c) For units that have not operated each calendar year during a period of five (5)
22 or more consecutive years, the baseline heat input shall not be established. For
23 purposes of allocations, the heat input shall be the average of the three highest

amounts of the unit's adjusted control period heat input for the previous five (5) years of operation, the:

1. Adjusted control period heat input for a control period of not operating shall equal zero; and

2. Cabinet shall allocate CAIR NO_x allowances for the unit.

(4) The adjusted control period heat input for each year shall be calculated as follows:

(a) If the unit is coal-fired during the year, the unit's control period heat input for that year shall be multiplied by 100 percent;

(b) If the unit is oil-fired during the year, the unit's control period heat input for that year shall be multiplied by sixty (60) percent; and

(c) If the unit is not subject to subsection (4)(a) or (b) of this section, the unit's control period heat input for that year shall be multiplied by forty (40) percent.

(5) For a calendar year, the unit's control period heat input and the unit's status as coal-fired or oil-fired shall be determined:

(a) In accordance with 40 C.F.R. Part 75, if the unit is subject to 40 C.F.R. Part 75;

(b) By the best available data reported to the cabinet for the unit if the unit is not otherwise subject to 40 C.F.R. Part 75; or

(c) By the best available data obtained by the cabinet.

(6) For CAIR NO_x units included in the pool specified in subsection (2)(a) of this section, the cabinet shall allocate CAIR NO_x allowances to each CAIR NO_x unit in an amount equal to the result obtained by:

1 (a) Multiplying the total amount of CAIR NOx allowances specified in subsection
2 (2)(a) of this section by the baseline heat input for each unit and the heat input
3 established under subsection (3)(c) of this section;

4 (b) Divided by the total amount of baseline heat input and the heat input
5 established under subsection (3)(c) of this section for all applicable CAIR NOx units;
6 and

7 (c) Rounding to the nearest whole CAIR NOx allowance, as appropriate.

8 (7) The cabinet shall submit to the U.S. EPA and CAIR NOx sources the CAIR
9 NOx allowances to be allocated and sold from the pools specified in subsection (2) of
10 this section in a format prescribed by the U.S. EPA by:

11 (a) October 31, 2006, for the control periods in 2009, 2010, 2011, 2012, 2013,
12 and 2014;

13 (b) October 31, 2009, for control period 2015; and

14 (c) October 31 of each year thereafter, for the control period in the sixth year
15 after the year of the applicable deadline for submission under this paragraph.

16 Section 4. Compliance Supplement Pool. The CAIR designated representative
17 may request early reduction credits and the allocation of CAIR NOx allowances from the
18 compliance supplement pool established under 40 C.F.R. 96.143(a) for any CAIR NOx
19 unit in the Commonwealth that achieves emission reductions in 2007 or 2008 or in both
20 years when compared to the unit's NOx emission rate during the 2006 control period.
21 Only emission reductions achieved in 2007 or 2008 or in both years that are not
22 necessary to comply with any state or federal emissions limitation applicable during

1 2007 and 2008 may be used to request early reduction credits as specified in this
2 section.

3 (1) The owners and operators of the CAIR NOx unit shall monitor and report the
4 NOx emissions rate and the heat input of the unit in accordance with 40 C.F.R 96.170 to
5 96.176 in each control period for which the early reduction is requested and for the 2006
6 control period. The difference resulting from subtracting the applicable 2007 or 2008
7 control period NOx emission rate from the 2006 control period NOx emission rate
8 multiplied by the applicable 2007 or 2008 control period heat input divided by 2000,
9 shall provide the amount in tons of the early reduction credit request.

10 (2) The CAIR designated representative shall submit to the cabinet by July 1,
11 2009, a request for allocation of an amount of CAIR NOx allowances from the
12 compliance supplement pool:

13 (a) Not exceeding the sum of the amounts, in tons, of the unit's NOx emission
14 reductions in 2007 and 2008 that are not necessary to comply with any state or federal
15 emissions limitation applicable during the years, determined in accordance with 40
16 C.F.R 96.170 to 96.176; or

17 (b) Not exceeding the minimum amount of CAIR NOx allowances necessary to
18 remove undue risk to the reliability of electricity supply.

19 (3) To request allocations pursuant to subsection (2)(b) of this section, the CAIR
20 designated representative shall demonstrate that in the absence of allocation of an
21 amount of CAIR NOx allowances requested, the unit's compliance with CAIR NOx
22 emissions limitation for the control period in 2009 would create an undue risk to the

1 reliability of electricity supply during the control period. This demonstration shall include
2 a showing that the owners and operators shall not feasibly obtain a sufficient amount of:

3 (a) Electricity from other electricity generating facilities during the installation of
4 control technology at the unit for compliance with the CAIR NOx emissions limitation to
5 prevent undue risk; or

6 (b) CAIR NOx allowances in accordance with this section, or otherwise, to
7 prevent undue risk.

8 (4) Early reduction credits shall be rounded to the nearest whole number and
9 distributed in the form of one (1) NOx allowance for one (1) ton of NOx emission
10 reduction.

11 (5) The cabinet shall distribute the early reduction credits on a proportional basis.

12 (a) The total amount of early reduction credit available to a CAIR NOx unit shall
13 be determined by the following calculation:

14 1. The unit's baseline heat input determined in Section 3(3)(a)1 of this
15 administrative regulation;

16 2. Divided by the total amount baseline heat input pursuant to Section 3(3)(a)1 of
17 this administrative regulation of this section from all sources; and

18 3. Multiplied by the early reduction credits available pursuant to 40 C.F.R.
19 96.143(a).

20 (b) The unused early reduction credits shall be combined together and distributed
21 pro rata to those CAIR NOx units with early reduction credits that exceeded the amount
22 of credits made available by the cabinet pursuant to paragraph (a) of this subsection by
23 the following calculation:

1 1. The applicable unit's emission reductions that exceeded the credits made
2 available pursuant to paragraph (a) of this subsection;

3 2. Divided by the total NOx emission reductions that exceeded the credits
4 provided under paragraph (a) of this subsection from all applicable units;

5 3. Multiplied by the total number of unused early reduction credits.

6 (c) Early reduction credits provided under paragraph (b) of this subsection shall
7 not cause the early reduction credits allocated to the source to exceed the number of
8 early reduction credits requested.

9 (6) By November 30, 2009, the cabinet shall determine and submit to the U.S.
10 EPA the allocations under this section.

11 (7) By January 1, 2010, the U.S. EPA shall record the allocations submitted
12 under subsection (6) of this section.

13 Section 5. Sale of CAIR NOx Allowances by the Commonwealth of Kentucky.

14 (1) The Commonwealth of Kentucky shall establish an account pursuant to 40
15 C.F.R. 96.351(b) for the purpose of selling the CAIR NOx allowances in the pool
16 specified in Section 3(2)(b) of this administrative regulation.

17 (2) The proceeds from the sale of the CAIR NOx allowances shall be deposited
18 in the general fund of the Commonwealth of Kentucky.

Date

LaJuana S. Wilcher, Secretary
Environmental and Public Protection Cabinet

PUBLIC HEARING AND PUBLIC COMMENT PERIOD: A public hearing on this administrative regulation shall be held on September 25, 2006, at 10:00 a.m. (local time) in the Conference Room of the Division for Air Quality at 803 Schenkel Lane, Frankfort, Kentucky. Individuals interested in being heard at this hearing shall notify this agency in writing five (5) workdays prior to the hearing of their intent to attend.

The hearing facility is accessible to persons with disabilities. Requests for reasonable accommodations, including auxiliary aids and services necessary to participate in the hearing, may be made to the contact person at least five (5) workdays prior to the hearing.

This hearing is open to the public. Any person who wishes to be heard will be given an opportunity to comment on the proposed administrative regulation. A transcript of the public hearing will be made. If you request a transcript, you will be required to pay for the transcript.

If you do not wish to be heard at the hearing, you may submit written comments on the proposed administrative regulation. Written comments shall be accepted until October 2, 2006. Send written notification of intent to be heard at the hearing or written comments on the proposed administrative regulation to the contact person.

CONTACT PERSON: Gerry Ennis, Environmental Technologist III, Division for Air Quality, 803 Schenkel Lane, Frankfort, Kentucky 40601, phone number (502) 573-3382, fax number (502) 573-3787, and email: gerry.ennis@ky.gov.

REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

Administrative Regulation #: 401 KAR 51:210

Contact Person: Gerry Ennis

(1) Provide a brief summary of:

- (a) What this administrative regulation does:** This administrative regulation establishes the requirements for the control of nitrogen oxides (NOx) emissions from any electric generating unit that is subject to the provisions of the Clean Air Interstate Rule (CAIR) NOx Trading Program. This administrative regulation will assist in mitigating interstate transport of NOx emissions.
- (b) The necessity of this administrative regulation:** The U.S. EPA is requiring 28 states and the District of Columbia to revise their State Implementation Plans (SIPs) to include control measures to reduce emissions of nitrogen oxides. NOx is a precursor to ozone. Reducing the emissions of NOx will assist 8-hour ozone nonattainment areas in achieving the national ambient air quality standard.
- (c) How this administrative regulation conforms to the content of the authorizing statutes:** KRS 224.10-100(5) requires the cabinet to promulgate administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation is proposed to reduce NOx emissions from electric generating units.
- (d) How this administrative regulation currently assists or will assist in the effective administration of the statutes:** This administrative regulation will reduce NOx emissions resulting in the protection of human health and the environment.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

- (a) How the amendment will change this existing administrative regulation:** This administrative regulation does not amend any existing administrative regulation.
- (b) The necessity of the amendment to this administrative regulation:** This administrative regulation does not amend any existing administrative regulation.
- (c) How the amendment conforms to the content of the authorizing statutes:** This administrative regulation does not amend any existing administrative regulation.
- (d) How the amendment will assist in the effective administration of statutes:** This administrative regulation does not amend any existing administrative regulation.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation. The owners and operators, along with a designated representative, of electric generating units will be subject to this administrative regulation.

- (4) **Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change if it is an amendment:**
- (a) **List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation:** Each affected electric generating unit will have to possess allocations sufficient to cover their emissions. In the absence of the required allocations, the affected electric generating unit will have to purchase allocations from the CAIR Box Annual Trading Program for excess emissions of NOx.
 - (b) **In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3):** The cost is an unknown entity.
 - (c) **As a result of compliance, what benefits will accrue to the entities identified in question (3):** The public will benefit from this administrative regulation.
- (5) **Provide an estimate of how much it will cost to implement this administrative regulation:**
- (a) **Initially:** The cabinet will not incur any additional costs for the implementation of this administrative regulation.
 - (b) **On a continuing basis:** There will not be any continuing costs for the implementation of this administrative regulation.
- (6) **What is the source of the funding to be used for the implementation and enforcement of this administrative regulation:** The cabinet's current operating budget will be used for the implementation and enforcement of this administrative regulation.
- (7) **Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment.** No increase in fees or funding is necessary to implement the proposed administrative regulation.
- (8) **State whether or not this administrative regulation establishes any fees or directly or indirectly increases any fees.** This administrative regulation does not establish, nor does it directly or indirectly increase any fees.
- (9) **TIERING: Is tiering applied?** Yes. This administrative regulation applies to electric generating units producing more than 25 MWe for sale.

FEDERAL MANDATE ANALYSIS COMPARISON

Administrative Regulation #: 401 KAR 51:210

Contact person: Gerry Ennis

- 1. Federal statute or regulation constituting the federal mandate.** The federal mandate is found at 40 C.F.R. 96.101 to 96.176 as published at 70 Fed. Reg. 25162 (May 12, 2005).
- 2. State compliance standards.** The state compliance standards are found in KRS 224.10-100, 224.20-100, 224.20-110, and 224.20-120.
- 3. Minimum or uniform standards contained in the federal mandate.** The federal mandate requires states to revise their State Implementation Plan to reduce the emissions of nitrogen oxides. The federal regulation contains model rules for multi-state cap and trade programs for NO_x emissions. The model rules provide states the ability to meet the required emissions reductions in a flexible and cost-effective manner. Each affected electric generating unit will have to possess allocations for the tons of emissions of NO_x for each control period. In the absence of the required allocations, the affected electric generating unit will have to purchase allocations from the CAIR NO_x Annual Trading Program for excess emissions of NO_x. Each electric generating unit will have flexibility in controlling NO_x emissions from the source.
- 4. Will this administrative regulation impose stricter requirements, or additional or different responsibilities or requirements, than those required by the federal mandate?** No. The administrative regulation follows the federal regulation model rule and will impose no more stringent requirements than those required by the federal mandate.
- 5. Justification for the imposition of the stricter standard, or additional or different responsibilities or requirements.** Stricter standards and requirements are not imposed.

FISCAL NOTE ON STATE OR LOCAL GOVERNMENT

Regulation No. 401 KAR 51:210

Contact Person: Gerry Ennis

1. Does this administrative regulation relate to any program, service, or requirements of a state or local government (including cities, counties, fire departments, or school districts)? No
2. What units, parts or divisions of state or local government (including cities, counties, fire departments, or school districts) will be impacted by this administrative regulation? No known units, parts or divisions of state or local government will be further impacted by this regulation.
3. Identify each state or federal statute or federal regulation that requires or authorizes the action taken by the administrative regulation. KRS 224.10-100(5), 40 C.F.R. 51.121, 51.122, 72.2, 75.1, 75.2, 75.4, 75.11 to 75.13, 75.17, 75.19, 75.20, 75.24, 75.70, 75.72, 75.74, 75.75, Part 96, 42 U.S.C. 7410
4. Estimate the effect of this administrative regulation on the expenditures and revenues of a state or local government agency (including cities, counties, fire departments, or school districts) for the first full year the administrative regulation is to be in effect.
 - (a) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for the first year? This administrative regulation will generate substantial revenues. A similar program, implemented in 2004 has generated approximately \$17 million to date. It is difficult to supply an exact amount due to the fluctuation in cost of a NOx allowance, and further depends on need by the electric generating utility sector.
 - (b) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for subsequent years? This regulation will bring substantial revenues to the state, although it is impossible to state a specific amount since the cost of NOx allowances fluctuate on a routine basis. Additionally, the cost per allowance is market driven depending on the need of the allowances available for purchase.
 - (c) How much will it cost to administer this program for the first year? The Division's operating budget continues as the source of funding for the implementation of this program. No additional personnel or resources should be needed to implement this program because the existing program to sell allowances will end when this one begins.
 - (d) How much will it cost to administer this program for subsequent years? The proposed regulation will have no effect on costs for administering the program in subsequent years.

Note: If specific dollar estimates cannot be determined, provide a brief narrative to explain the fiscal impact of the administrative regulation.

Revenues (+/-):

Expenditures (+/-):

Other Explanation: